

Appl. No. 09/865,295  
Amd. Dated September 29, 2005  
Reply to Office Action of June 29, 2005

### **REMARKS/ARGUMENTS**

Reconsideration of the present amendment, as amended, is respectfully requested.

Of previously pending claims 1-25, all were rejected. Claims 17, 22, and 23 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,436,750, which issued July 25, 1995 to T. Kawano. Claims 1-16, and 18-21 were rejected under 35 U.S.C. §103(a) as being obvious over the cited Kawano patent in view of U.S. Patent No. 5,715,076, which issued Feb. 3, 1998 to Alexander *et al.* Claims 11-13, 16 and 21 were rejected under 35 U.S.C. §103(a) as being obvious over the cited Kawano patent. Claims 7-10, 14, 15, and 18-20 were rejected under 35 U.S.C. §103(a) as being obvious over the cited Kawano patent in view of U.S. Patent No. 6,204,959, which issued March 20, 2001 to Fujita *et al.* Claims 24 and 25 were rejected under 35 U.S.C. §103(a) as being obvious over the cited Kawano patent in view of U.S. Patent No. 6,515,967, which issued Feb. 4, 2004 to Wei *et al.*

Applicants have amended claims 1, 6, 12, 22-25.

#### **Rejection under 35 USC §102(b) – claims 17, 22, and 23**

Claims 17, 22, and 23 were rejected under 35 USC §102(b) as being allegedly anticipated by Kawano. This rejection is respectfully traversed.

A claim must be anticipated for a proper rejection under §102(a), (b), and (e). This requirement is satisfied “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”; see MPEP §2131 and *Verdegaal Bros. V. Union Oil*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1984). A rejection under §102(b) may be overcome by showing that the claims are patentably distinguishable from the prior art; see MPEP §706.02(b).

With respect to claim 17, the Examiner cited col. 2, lines 43-46 and col. 6, lines 56-66 of the Kawano patent as teaching the applicants’ claimed “means for recovering data...”. With due respect to the Examiner, the cited portions describe a terminal of the link, specifically the downstream stream terminal T2 of Figs. 1 and 2. On the other hand, what is claimed in independent claim 17 is an “[a]pparatus for monitoring performance of an optical communication

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link at an intermediate location along said link (underlining added)." The cited portions of the Kawano patent are inapposite to claim 17 and do not anticipate the applicants' claimed invention.

Furthermore, Kawano describes an optical multiplex of a data signal and a supervisory signal sent from a first terminal station. The supervisory signal and the fault-point indicating signal are monitored at a downstream repeater station. "The repeater station constantly monitors the supervisory signal". Col.2, lines 37-38. Kawano teaches "detecting the presence or the absence of both of the supervisory signal and the fault-point indicating signal to produce an alarm signal." Col. 2, lines 46-48.

In contrast, claim 17 claims "means for generating an indication of link operation based on a number of errors detected by said error identifying means." Likewise, claim 22 recites, "means for receiving indications of whether a data optical signal is received successfully from a plurality of monitor locations along an optical link based on a number of errors detected at each monitor location". Claim 23 claims "means for receiving indications of whether a data optical signal is received successfully from a plurality of monitor locations along an optical link based on a number of errors detected at each monitor location." Kawano teaches a detector "for determining whether the supervisory signal is present or not in the amplified signal." Col. 1, lines 59-60. Kawano determines the presence or absence of the supervisory signal. Kawano does not teach or suggest counting a number of detected errors.

The presently claimed invention is, accordingly, distinguishable over the cited reference. In the view of the foregoing, it is respectfully asserted that claims 17, 22, and 23 are now in condition for allowance.

#### **Rejection under 35 USC §103(a) – claims 1-16, and 18-21**

Claims 1-16 and 18-21 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Kawano in view of Alexander. This rejection is respectfully traversed.

Under MPEP §706.02(j), in order to establish a *prima facie* case of obviousness required for a §103 rejection, three basic criteria must be met: (1) there must be some suggestion or motivation either in the references or knowledge generally available to modify the reference or combine reference teachings (MPEP §2143.01), (2) a reasonable expectation of success (MPEP

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§2143.02), and (3) the prior art must teach or suggest all the claim limitations (MPEP §2143.03).  
See *In re Royku*, 490 F. 2d 981, 180 USPQ 580 (CCPA 1974).

The applicants disagree with the rejection claims 1-16 and 18-21 rejection. First, the applicants do not see the motivation in the cited references to make the combination as suggested by the Examiner. Given the ability of the Kawano system to locate faults in a transmission system, why is there a need to use Forward Error Correction (FEC) to perform the same task, as the Examiner's appears to have assumed. How exactly is the FEC of Alexander et al. to be combined with the Kawano transmission system?

Even assuming *arguendo* making the combination of Kawano and Alexander as the Examiner suggests, the proposed combination would not possess all of the claim limitations of claims 1-16, and 18-21.

The Office Action states that "Kawano does not disclose performing error corrections decoding on said first measurement electrical signal." Paragraph 4 of the Office Action. Alexander describes forward error correction (FEC) encoders and decoders used for decreasing the bit error rate (BER) by adding redundancy. See col. 6, lines 8-27. Alexander teaches encoding and decoding to decrease the bit error rate and to recover data. To accomplish this, note that the locations of the FEC blocks 45 and 114 are in the optical remodulators 30 (see Fig. 2) and remodulating selectors 100 (see Fig. 3), not in the intermediate transmission link formed by the optical waveguide 60 and amplifiers 70 between the transmitters and receivers. On the other hand, the presently claimed invention monitors the performance of an optical communication link. The first element of independent claim 1 starts with the phrase, "at a first intermediate location along said link". Independent claim 6 claims, "Apparatus for monitoring performance of an optical communication link at an intermediate location along said link...". Independent claim 12 has the element, "a first link monitor that monitors performance of said link at a first intermediate location along said link...". The locations of the Alexander FEC blocks and where the applicants' claimed invention operates are different. Hence the mere combination of the Alexander patent with the Kawano patent provides no basis for rejecting 1-16, and 18-21.

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Furthermore, claim 1 has been amended to "perform[ing] error correction decoding on said first measurement electrical signal to generate an indication of correct receipt of data at said first intermediate location based on a number of detected errors in the data." The applicants count the number of detected errors in the data, not necessarily to decode the data as taught by Alexander. "It is not necessary for error correction decoding block 208 to output decoded data." See page 10, lines 8 –11 of the present specification. Alexander does not suggest counting a number of detected errors in the data to generate an indication of the correct receipt of data. Nor does Kawano, nor the two cited references in combination teach nor mention this limitation. Independent claims 6 and 12 (and 17) have been also amended to have similar language. ,

The applicants therefore submit that the rejection based the Kawano and Alexander reference is improper and should be withdrawn. Thus, the applicants submit that claims 1-16 and 18-21 recite novel subject matter which distinguishes over any possible combination of Kawano and Alexander.

**Rejection under 35 USC §103(a) – claims 11-13, 16 and 21**

Claims 11-13, 16 and 18-21 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Kawano. This rejection is respectfully traversed.

The applicants request reconsideration of claims 11-13, 16 and 18-21 rejection because even if Kawano were to be modified in the manner proposed, the proposed modification would not possess all of the claim limitations of claims 11-13, 16, and 18-21. The arguments set forth above regarding claims 1-16 and 18-21 are equally applicable here.

In particular with respect to claim 12, Kawano does not teach or suggest "a link verification stage that generates an indication of link operation **based on a number of errors detected** by said error correction decoding circuit." (emphasis added).

The applicants therefore submit that the rejection based the Kawano reference is improper and should be withdrawn. Thus, the applicants submit that claims 11-13, 16, and 18-21 recite novel subject matter which distinguishes over any possible modification of Kawano.

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**Rejection under 35 USC §103(a) – claims 7-10, 14, 15, and 18-20**

Claims 7-10, 14, 15, 18-20 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Kawano in view of Fujita. This rejection is respectfully traversed.

The arguments set forth above regarding claims 1-16 and 18-21 are equally applicable here. Fujita describes a wavelength tunable filter. There is no mention of counting a number of detected errors in transmitted data.

These rejections are respectfully traversed for at least the reason that each of the rejected claims ultimately depend on an above-discussed base claim. The arguments set forth above regarding the base claims are equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

**Rejection under 35 USC §103(a) – claims 24 and 25**

Claims 7-10, 14, 15, 18-20 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Kawano in view of Wei. This rejection is respectfully traversed.

The arguments set forth above regarding claims 1-16 and 18-21 are equally applicable here. Furthermore, there is no justification in Kawano nor Wei that suggests that both references be combined in the manner proposed. Kawano is directed to an optical transmission system. Wei is directed to a multicast routing infrastructure. One of ordinary skill in the art would not have been motivated to combine these two references from different fields.

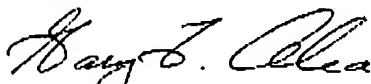
Further, claims 24 and 25 recite “code that causes reception of indications of whether a **data** optical signal is received successfully from a plurality of monitor locations along an optical link...(emphasis added).” The Kawano system operates by the reception of the **supervisory** signal at the repeater stations R1-Rn, and not the data signal (f<sub>d</sub>). Hence claims 24 and 25 are not obvious over the combination of the Kawano and Wei patents and should be allowed.

In summary, independent claims 1, 6, 12, 17, and 22-25 are all allowable. Dependent claims 2-5, 7-11, 13-16, and 18-21 should also be allowable for at least being dependent upon allowable base claims.

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Therefore, in view of the amendments above and the remarks directed thereto, the applicants request that all rejections be removed, that claims 1-25 be allowed, and the case be passed to issue. If a telephone conference would in any way expedite the prosecution of the application, the Examiner is asked to call the undersigned at (408) 868-4088.

Respectfully submitted,



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